

**Background Document  
For Proposed Amendments To**

**301 CMR 41.00  
Toxic or Hazardous Substance List**

**Regulatory Authority:  
M.G.L. Chapter 21I, §§ 4 and 9**

**October 2008**

## **I. INTRODUCTION**

The Executive Office of Energy and Environmental Affairs (EEA), on behalf of the Administrative Council for Toxics Use Reduction, is proposing to amend the Toxic or Hazardous Substance List regulations, 301 CMR 41.00, to implement decisions made by the TURA Administrative Council in 2008, pursuant to its duties under the Toxics Use Reduction Act (TURA, MGL c. 21I, as amended in July 2006).

## **II. BACKGROUND**

Originally enacted in 1989, TURA requires certain facilities to report their use of toxic chemicals and examine ways to decrease their use of toxic chemicals and wastes generated, with the goal of protecting public health, the environment, and workers, while helping businesses become more competitive.

TURA committed Massachusetts to reduce toxic use and byproducts (meaning all varieties of waste resulting from the use of a toxic chemical, such as air emissions and wastewater discharges, as well as solid wastes, such as sludges). The highly successful TURA program has helped Massachusetts businesses reduce toxics use by 40% and toxic byproducts by 71%<sup>1</sup>, reducing chemical transportation risks, workplace hazards, and toxics in products, while helping Massachusetts businesses remain competitive in a global marketplace increasingly aware of toxics issues.

From its inception, TURA established an Administrative Council for Toxics Use Reduction that has the responsibility, among other duties, to make adjustments to the Toxic or Hazardous Substance List. As the chair of the Council, the Secretary of EEA promulgates the Council's regulations.

TURA was updated and improved in July 28, 2006, by "An Act Amending the Toxics Use Reduction Act" (Chapter 188 of the Acts of 2006). The 2006 TURA amendments, among other actions, provided for the careful review of the Toxic and Hazardous Substances List that triggers regulatory coverage under TURA by facilities using greater than threshold amounts of chemicals on the list. Specifically, it directed the Administrative Council to consider whether chemicals should be designated as higher or lower hazard, and whether chemicals listed pursuant to the federal CERCLA law should remain on the TURA list. This regulatory package implements the actions taken by the Administrative Council during 2008 affecting the TURA list of covered toxic or hazardous substances.

## **III. DESCRIPTION OF THE PROPOSED REGULATIONS**

### **Toxic or Hazard Substance List, 301 CMR 41.00**

#### **1. Higher Hazard Designations**

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<sup>1</sup> Measured using 2005 data normalized for changes in production reported by a core group of industries that have been subject to reporting since 1990.

When first enacted, TURA did not differentiate toxics according to their level of hazard. The 2006 statutory amendments gave the Council authority, in consultation with the Toxics Use Reduction Institute (TURI) and the Science Advisory Board (SAB), to designate a toxic substance as higher hazard or lower hazard, or to leave the substance uncategorized. (The Council also takes the recommendations of the TURA Advisory Committee into account in all of its deliberations). For a higher hazard substance, the threshold for reporting is lowered to 1,000 pounds, and the Council has authority to further lower the reporting threshold. Persistent, bio-accumulative, and toxic chemicals (PBTs) are automatically designated as higher hazard substances, but already have reporting thresholds lower than 1,000 pounds as established by the U.S. Environmental Protection Agency (EPA). For a lower hazard substance, the “per chemical” fee is eliminated.

The process for designating higher hazard and lower hazard substances is as follows:

1. The SAB reviews the scientific data and recommends designations;
2. TURI prepares a policy analysis of the recommended designations for the Council’s consideration;
3. The TURA Advisory Committee reviews the recommendations;
4. The Council takes action on the recommended designations;
5. EEA promulgates the Council’s action in 301 CMR 41.00;
6. The designations take effect in the calendar year after the year the designations are promulgated in 301 CMR 41.00.

To date, the SAB has recommended 11 substances to be considered for designation as higher hazard substances: cyanide compounds, ethylene oxide, nickel compounds, chlorine, arsenic compounds, cadmium compounds, formaldehyde, benzene, trichloroethylene, perchloroethylene, and hydrogen cyanide. The SAB also has recommended 11 substances to be considered for designation as lower hazard substances: n-butyl alcohol, sec-butyl alcohol, ethylene glycol, methanol, silver in alloy form, zinc in alloy form, acetone, acetic acid (>12% concentration), isobutyl alcohol, methyl ethyl ketone, ethyl acetate.

In 2007, the Administrative Council designated trichloroethylene and cadmium and cadmium compounds as higher hazard substances. The regulations to implement those designations went into effect on December 28, 2007. In 2008, the Administrative Council designated perchloroethylene a higher hazard substance, and three substances as lower hazard substances: Isobutyl Alcohol, Sec-butyl Alcohol and N-butyl Alcohol. If final regulations that include these designations are promulgated in 2008, the applicable reporting threshold for perchloroethylene would be 1,000 pounds for the 2009 reporting period, with toxics use reports reflecting the new threshold due by July 1, 2010. There would be no change in the threshold for the butyl alcohols, but companies reporting those lower hazard chemicals would no longer pay the per-chemical fee as part of the total toxics use fee, beginning with the 2009 reporting period.

## 2. CERCLA List Retention

TURA’s Toxic or Hazardous Substance List is based on chemical lists established by two federal statutes: Section 313 of EPCRA (Emergency Planning and Right-to-Know Act) and sections 101(14) and 102 of CERCLA (the Comprehensive Environmental Response, Compensation and

Liability Act). The EPCRA chemicals are the same chemicals reported under EPA's Toxics Release Inventory (TRI) program. Historically, most substances reported under TURA are EPCRA substances. Only 81 CERCLA chemicals (out of more than 400 "CERCLA-only" chemicals) have ever been reported under TURA.

The 2006 statutory amendments mandated a review of the CERCLA chemicals by the Administrative Council on whether to retain or delete the CERCLA chemicals. The process for reviewing CERCLA chemicals is similar to the process described above for designating substances as higher hazard or lower hazard. The Council makes final decisions (taking into consideration recommendations from the SAB and TURI) whether to retain or delete any CERCLA chemicals and those decisions must be codified in 301 CMR 41.00 to take effect.

In 2007 the Council took action on the CERCLA chemicals, deciding to retain all CERCLA chemicals through the end of the calendar year 2008.

During 2008, the SAB completed its review, and TURI presented its recommendations to the TURA Advisory Committee. Both the SAB and TURI recommended that most CERCLA chemicals should be retained on the TURA toxic or hazardous substance list, and both recommended that some chemicals should be deleted. These lists differed in some respects. In addition, TURI recommended that CERCLA chemicals included in EPCRA chemical compound categories should no longer be listed individually, since the amounts of these individual chemicals must be reported as part of the EPCRA categories.

However, some members of the TURA Advisory Committee and some members of the Administrative Council strongly urged the Council not to drop any substances from the toxic or hazardous substance list. These recommendations were made for several reasons, including the possibility that excluding chemicals from the list could imply to the regulated community and others that the excluded chemicals were safe to use, and the belief by several committee members that the reviews by the SAB and TURI were not sufficient to determine that this was the case. A precautionary approach in the face of the lack of evidence was recommended to the Council by several members of the Advisory Committee and some members of the Council itself. As a result, in September 2008 the Council decided to retain all CERCLA chemicals on the list, except that several chemicals should be retained only for Reporting Year 2009; and that these chemicals should be further reviewed by the SAB to determine whether each should be permanently retained or deleted. The Council gave instructions to the SAB on the standard it should use in conducting further review of this list of chemicals, and expects to make a final decision regarding these chemicals during calendar year 2009. In addition, the Council agreed that the substances belonging to EPCRA-listed categories and listed individually should no longer be individually listed. (Companies using these chemicals will still need to report under TURA, because they are still listed by virtue of belonging to listed categories).

#### **IV. Impacts of Proposed Revisions**

##### **A. Economic Impacts**

1. Designation of Perchloroethylene as a higher hazard substance. Based on estimates by the Toxics Use Reduction Institute and information from MassDEP's dry cleaner Environmental Results Program, the 1,000 pound reporting threshold for perchloroethylene may lead to from 50 to 80 companies having to report under TURA that were not reporting in this current year. Some of these companies have already been reporting under TURA for other chemicals, or for perchloroethylene but have stopped reporting because their use has dropped below existing thresholds. Reducing the threshold will bring these companies back into the program. Some companies will be new to the program. It is expected that nearly all of these new facilities will have fewer than 50 employees. (This regulation only affects facilities with more than 10 employees in TURA covered SIC codes). These facilities will be required to prepare and submit a toxic use report to the MassDEP annually, and prepare a toxic use reduction plan and submit a plan summary to the MassDEP every two years.

TURI estimates that the companies new to TURA may experience a cost of compliance estimated to be \$500 to \$800 per company to perform the planning and reporting activities if the TURA programs actively assist these companies in complying. Without that assistance the estimated initial costs are an average of \$2,600 per company. Surveys of companies covered by TURA have shown that compliance costs diminish significantly over time, as companies learn how to comply efficiently with the law's requirements.

The cost associated with annual reporting to MassDEP consists of a base fee and a per-chemical fee. The base fee depends on the size of the facility; the per-chemical fee is the same for all facilities, and is set at \$1,100. If a facility were already a TURA filer, then newly reporting on a higher hazard chemical would add \$1,100 to the amount already paid by that facility. If the facility is not currently covered by TURA, then the fee for the new entrant would be \$2,950. Total initial costs, therefore, for fees, reporting and planning, are estimated to range from \$3,400 to \$5,600 per company. The amendments to the TURA statute do provide the Administrative Council with the authority to raise fees for higher hazard chemicals, but this will not occur for the 2009 reporting year. In addition, preliminary discussions with the TURA Advisory Committee concerning how new fees may be structured have involved setting fee maximums to avoid an overly burdensome impact on small businesses.

Surveys and the experience of the program, including thousands of contacts with regulated facilities by program staff, have shown that many companies experience benefits from the examination of alternatives that TURA prompts. TURA's planning requirements lead companies not only to consider alternative chemicals (which include some of the safer chemicals many dry cleaners are now using in order to market their services to "green" consumers), but also to consider ways to ensure that leaks, spills, emissions and other inefficiencies of chemical use are minimized to the extent practicable. TURA often prompts equipment upgrading, process modernization, improvements in housekeeping, and the ability to capture new marketing opportunities for greener products and services.

Although companies are not required to implement specific toxics use reduction alternatives identified in their plan, program evaluation has shown they are likely to adopt and implement many options that have a positive economic benefit. A 1997 TURA program evaluation found that in the first five years of TURA, the program produced a net economic benefit for the

regulated community and the Commonwealth as a whole. Compliance costs for all firms totaled \$67.4 million, and as a result of planning, companies chose to make capital investments totaling \$37 million and had savings in operating costs totaling \$120.3 million (all figures in 2007 dollars). It is anticipated that these economic benefits could be realized by new companies to the TURA program.

2. Designation of three butyl alcohols as lower hazard substances. The designation of three chemicals as lower hazard will mean that companies using those chemicals will no longer be required to pay a \$1,100 per-chemical fee for each low-hazard chemical beginning in Reporting Year 2009. Based on previous TURA reporting, it is expected that about 14 companies will experience these savings. These companies may also have beneficial impacts if they choose to market themselves as using “safer” chemicals.

3. Other changes to the toxics or hazardous substance list. The other changes in this regulatory promulgation will have no impact because the changes to the list do not result in any changes in reporting responsibilities on the part of TURA-covered companies. Nor do they impose new responsibilities on any companies.

## **B. Agricultural Impacts**

Pursuant to MGL c. 30A, Section 18, State agencies must evaluate the impact of proposed programs on agricultural resources within the Commonwealth. The proposed revisions may result in a further reduction in the use and release of perchloroethylene into the environment. Perchloroethylene is a volatile organic compound (VOC) that contributes to the formation of ground-level ozone, which adversely affects vegetation and crops. It is also a chemical that can contribute to groundwater and soil contamination. Reduction of the use and release of this chemical is likely to have a positive impact on agricultural production to the extent that VOCs are reduced through toxics use reduction. The change in status of the butyl alcohols to lower hazard chemical will have no agricultural impacts.

## **C. Impacts on Municipalities**

Pursuant to Executive Order 145, State agencies must assess the fiscal impact of new regulations on the Commonwealth’s municipalities. Municipalities are statutorily exempt from TURA and therefore the proposed amendments will have no direct effect on them. However, municipalities are likely to benefit from reduced pollution and associated risks to the extent the proposed amendments reduce the use of toxic substances in their jurisdictions.

## **D. MEPA**

The proposed amendments are “categorically exempt” from the “Regulations Governing the Preparation of Environmental Impact Reports,” 301 CMR 11.00, because the proposed amendments do not lessen the stringency of any environmental standards.